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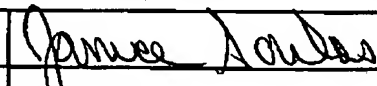
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<b>TRANSMITTAL FORM</b>  (to be used for all correspondence after initial filing)	Application Number	10/803,237	
	Filing Date	3/19/2004	
	First Named Inventor	Beat Heer, et al.	
	Art Unit	1616	
	Examiner Name	Alton Nathaniel Pryor	
Total Number of Pages in This Submission	17	Attorney Docket Number	A01503

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SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT			
Firm Name	Rohm and Haas Company		
Signature			
Printed name	Stephen T. Falk		
Date	July 18, 2007	Reg. No.	38,795

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GROUP ART UNIT: 1616  
APPEAL NO. \_\_\_\_\_

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**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE BOARD OF APPEALS AND INTERFERENCES**

**APPEAL BRIEF**

In re the Application of Beat Heer et al.

Filed: March 18, 2004

Serial No. 10/803,237

For: MICROBICIDAL COMPOSITION

Kenneth Crimaldi  
*Attorney for Appellants*

Alton Nathaniel Pryor  
*Examiner*

Enclosed:  
Transmittal Form

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July 16, 2007

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**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re application of: Beat Heer et al.

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Application No.: 10/803,237

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Group No.: 1616

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Filed: March 18, 2004

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Examiner: Alton Nathaniel Pryor

For: MICROBICIDAL COMPOSITION

MAIL STOP APPEAL BRIEF - PATENTS  
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**APPEAL BRIEF**

This is an appeal from the rejection dated March 26, 2007 finally rejecting claims 1, 6-8 and 10-12. The rejected claims are set out in Appendix J. Appellants filed a Notice of Appeal pursuant to 37 C.F.R. § 1.191 on June 25, 2007.

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**(C) Real Party In Interest**

The owner of the present application and the invention contained therein is  
ROHM AND HAAS COMPANY.

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**(D) Related Appeals, Interferences or Judicial Proceedings**

No appeals, interferences or judicial proceedings are known to Appellants, the Appellants' legal representative, or the assignee which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

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**(E) Status Of Claims**

The status of the claims is as follows:

Claims pending: 1 and 3-12

Allowed claims: 3-5 and 9

Claims objected to: none

Claims canceled: 2

Claims rejected: 1, 6-8 and 10-12

Claims on appeal: 1, 6-8 and 10-12

Claims withdrawn from consideration by the Examiner: none.

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**(F) Status Of Amendments**

Appellants have not filed an amendment after final rejection in the present application.



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**(G) Summary of Claimed Subject Matter**

**Claim 1:** The present invention provides a microbicidal composition comprising:

(a) at least one non-halogenated 2-alkyl-4-isothiazolin-3-one selected from substituted and unsubstituted 2-(C<sub>1</sub>-C<sub>4</sub>)alkyl-4-isothiazolin-3-ones [page 1, lines 19-20]; and

(b) at least one of 2,2'-dithiobis(N-methylbenzamide) and 2-methylbenzothiazolone [page 1, lines 21-22];

wherein a weight ratio of said at least one non-halogenated 2-alkyl-4-isothiazolin-3-one to said at least one of 2,2'-dithiobis(N-methylbenzamide) and 2-methylbenzothiazolone is from 750:1 [page 3, lines 26-28] to 1:1 [page 10, Table 1, 5<sup>th</sup> row].

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**(H) Grounds of Rejection to be Reviewed on Appeal**

Claims 1, 6-8 and 10-12 stand rejected under 35 USC § 112, first paragraph as failing to comply with the written description requirement, and under 35 USC § 103(a) as obvious over Yamaguchi (JP 2001302418).

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**(I) Argument**

(a) Regarding whether or not claims 1, 6-8 and 10-12 comply with the written description requirement of 35 U.S.C. § 112, first paragraph:

**Data Points from Examples May be Used to Amend Range Endpoints in the Claims**

When Applicants amended the claims in the Amendment submitted November 30, 2005, they used data from their examples as support for the 1:1 range endpoint of claim 1, and the 2.5:1 range endpoint of claims 6, 8 and 12. "The PTO has done nothing more than to argue lack of literal support, which is not enough." *In re Wertheim*, 541 F.2d 257, 265 (C.C.P.A. 1976). In *Wertheim*, the C.C.P.A. held that a claimed range of 35-60% met the written description requirement, based on a disclosed range of 25-60%, and an example at 36%. *Id.*; see also M.P.E.P. § 2163.05(III). In the present case, Applicants have made a similar amendment by using data from the first table on page 10 to support a 1:1 ratio and a 2.5:1 ratio as new range endpoints in their claims. In the former case, the table entries at cols. 1&2, 5<sup>th</sup> row of data, show that 20 ppm of MIT and 20 ppm of MBI, i.e., a 1:1 ratio, is a synergistic mixture (Synergy Index, SI<1). In the latter case, the table entries at cols. 4&5, 2<sup>nd</sup> row of data, show that 10 ppm of MIT and 4 ppm of MBI, i.e., a 2.5:1 ratio, is a synergistic mixture (SI<1).

To meet the written description requirement, Applicants must describe their invention in sufficient detail to demonstrate to one skilled in the art that Applicants had possession of the claimed invention, and to put the public in possession of the invention. *Regents of the University of California v. Eli Lilly*, 119 F.3d 1559, 1566 (Fed. Cir. 1997). In this case, the claimed ratios of 1:1 and 2.5:1 were disclosed in the specification, as described above. Therefore, there is no doubt that Applicants possessed knowledge of these ratios and disclosed it in their application. The PTO has not suggested any reason, and Applicants are not aware of any, that the amended ranges are not supported by the cited disclosures in the specification. Accordingly, claims 1, 6-8 and 10-12 comply with the written description requirement.

- (b) Regarding whether or not claims 1, 6-8 and 10-12 are obvious over Yamaguchi (JP 2001302418):

1. Applicants Have Demonstrated Unexpected Results

The present invention claims a ratio of non-halogenated 2-alkyl-4-isothiazolin-3-one to 2-methylbenzisothiazolone from 750:1, whereas the reference discloses a range (for a large number of combinations) of 99:1 to 1:99. However, even in cases where a claimed range actually overlaps with a prior art range or is contained within it, a finding of obviousness still may be rebutted by demonstrating unexpected results relative to the prior art disclosure. *See In re Woodruff*, 919 F.2d 1575, 1578 (Fed. Cir. 1990); M.P.E.P. § 2144.05(III). Synergistic interaction between molecules always is unexpected, and neither its existence nor the composition ranges over which two molecules will exhibit synergistic interaction can be predicted. Yamaguchi does not demonstrate that the combinations disclosed therein, or any others, are synergistic at any ratio. Accordingly, there is no reason that one skilled in the art would expect a synergistic interaction between Applicants' claimed biocides at a 1:1 ratio, or any other ratio. Applicants have demonstrated (see pages 10-21) that their claimed biocide combinations display synergistic activity (synergy index < 1) within the claimed ranges of biocide ratios, and accordingly, they have demonstrated unexpected results for these biocide combinations. Therefore, the claims cannot be obvious over the disclosure of the reference.

2. Claims 6, 7, 10 and 12

These dependent claims narrow the invention further in important ways. Claim 10 narrows the isothiazolone biocide from "substituted and unsubstituted 2-(C<sub>1</sub>-C<sub>4</sub>)alkyl-4-isothiazolin-3-ones" to a single biocide, 2-methyl-4-isothiazolone-3-one. Claim 12 narrows the invention further to limit the endpoint of the ratio to 2.5:1, further from Yamaguchi's disclosure of these biocides in a ratio of 1:1.33 than is claim 1, with a ratio of 1:1. Claims 6 and 7 introduce the same limitations. Since these dependent claims

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recite a more limited combination of biocides and/or a more limited range of biocide ratios than independent claim 1, Yamaguchi is still further from suggesting these claims.

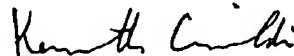
### CONCLUSION

Based on the foregoing, Appellants respectfully submit that the pending claims are currently in condition for allowance. Appellants respectfully request the Board to pass the pending claims to allowance.

Enclosed herewith, Appellants have filed a Certificate of Mailing to establish the timely filing of this Appeal Brief.

The Commissioner is hereby authorized to charge any additional fee which may be required, or to credit any overpayments to Deposit Account 18-1850.

Respectfully submitted,



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Registration No. 40,968

ROHM AND HAAS COMPANY  
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July 16, 2007

(J) Claims Appendix

1. A microbicidal composition comprising:
  - (a) at least one non-halogenated 2-alkyl-4-isothiazolin-3-one selected from substituted and unsubstituted 2-(C<sub>1</sub>-C<sub>4</sub>)alkyl-4-isothiazolin-3-ones; and
  - (b) at least one of 2,2'-dithiobis(N-methylbenzamide) and 2-methylbenzisothiazolone;wherein a weight ratio of said at least one non-halogenated 2-alkyl-4-isothiazolin-3-one to said at least one of 2,2'-dithiobis(N-methylbenzamide) and 2-methylbenzisothiazolone is from 750:1 to 1:1.
6. The composition of claim 1 in which said at least one of 2,2'-dithiobis(N-methylbenzamide) and 2-methylbenzisothiazolone is 2-methylbenzisothiazolone and said weight ratio is from 750:1 to 2.5:1.
7. The composition of claim 6 in which said at least one non-halogenated 2-alkyl-4-isothiazolin-3-one is 2-methyl-4-isothiazolin-3-one.
8. The composition of claim 7 in which said weight ratio is from 125:1 to 2.5:1.
10. The composition of claim 1 in which said at least one non-halogenated 2-alkyl-4-isothiazolin-3-one is 2-methyl-4-isothiazolin-3-one.
11. A household product, cosmetic, toiletry, shampoo, soap or detergent comprising the microbicidal composition of claim 10.

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12. The household product, cosmetic, toiletry, shampoo, soap or detergent of claim 11 in which said at least one of 2,2'-dithiobis(N-methylbenzamide) and 2-methylbenzisothiazolone is 2-methylbenzisothiazolone and said weight ratio is from 750:1 to 2.5:1.

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**(K) Evidence Appendix**

No evidence was submitted during prosecution.



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**(L) Related Proceedings Appendix**

There are no related proceedings.